

**Rejection under 35 U.S.C. §103**

The rejection of Claims 1-8 under 35 U.S.C. §103 as being unpatentable over Gosens et al., Wittman et al., Kambour, Fukasawa et al. and Kress et al. is respectfully traversed.

The present invention relates to flame retardant thermoplastic compositions. The utilization of phosphate flame retardants in ABS/aromatic polycarbonate blend compositions with PTFE is known in the art. Such compositions exhibited less than desired levels of weatherability. Shipment and storage of articles made of such materials in extremely hot humid climates can undersirably result in embrittlement and loss of impact properties in the articles. Consequently, there is a need to develop polycarbonate/ABS graft copolymer compositions which exhibit enhanced retention of impact properties upon prolonged exposure to heat and humid. As recited in Claim 1, the flame retardant thermoplastic compositions of the present invention comprises aromatic polycarbonate resin and rubber modified vinyl aromatic-unsaturated nitrile-diene rubber graft copolymer. The critical feature of this invention is based on the discovery that the retention of Izod impact strength aft aging is significantly improved with increasing rubber content. As shown in Table 1 of the Specification, with increasing HRG loading, the Izod impact strength after heat and humidity aging is excellent. All samples contain higher rubber than the control sample still retain about 80% of the original value and fail in ductile when the control sample fails in brittle with low impact value after one week. This is a very dramatic improvement over the current control sample.

It is respectfully submitted that Gosens et al. fails to teach or suggest the diene rubber of the graft copolymer being present at a level of from 6 to 12 percent by weight based on the total weight of the composition as required by the present invention. Applicants respectfully disagree with the Examiner's

(AN: Fifty to seventy percent diene content in vinyl resin is equivalent to 6 to 12

8.4% diene rubber in total composition. This range is well within Applicants' stipulated 6 to 12 percent of total composition."

Applicants respectfully direct the Examiner's attention to Column 6, lines 1-35 of Gosens et al. wherein ABS-2 is defined as "a graft copolymer built up substantially from a butadiene rubber on which styrene and acrylonitrile have been grafted with a rubber content of approximately 70%", and ABS-3 is defined as "a similar product as ABS-1 and ABS-2 with a rubber content of approximately 50%." In Table C of Gosens et al. compositions V, E, XII and XIII contain 9% of ABS-2. The rest of the compositions contain 12% of ABS-3. In compositions V, E, XII and XIII, the rubber content based on the total weight of the composition is 9 parts by weight  $\times 70\% = 6.3$  parts by weight. In the rest of the compositions, the rubber content based on the total weight of the composition is 12 parts by weight  $\times 50\% = 6$  parts by weight. Thus Gosens et al. compositions maintain the rubber content at a level of about 6 parts by weight based on the total weight of the composition.

It is respectfully submitted that Wittman et al. also fails to teach or suggest when the diene rubber of the graft copolymer is present at a level of from 6 to 12 percent by weight based on the total weight of the composition, the Izod impact after aging can be significantly improved. Wittman et al.'s rubber content constitute 95-10 parts by weight of the graft copolymer. As shown in Table 1, the composition comprises 5 parts by weight of graft copolymer. Thus the rubber content is  $4.75$  parts by weight based on the total weight of the composition.

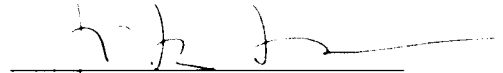
Kress et al. requires halogen-containing polycarbonate. Kambour and Fukasawa et al. systems are not anywhere close to the system of the present invention. Thus the section 103 rejection is improper and withdrawal of the rejection is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Should the Examiner have any questions after reviewing this Amendment, she is cordially invited to call the undersigned attorney so that this case may receive an early Notice of Allowance.

Favorable consideration and allowance are earnestly solicited.

Respectfully submitted:



Li-Hua Luo  
Attorney for Applicants  
Registration No. 37,986  
Telephone No. (413) 448-7734

GENERAL ELECTRIC CO  
One Plastics Avenue  
Pittsfield, MA 01201  
June 26, 1996  
LHL/plo